We claim:

1. A blood purification device comprising;

a blood circuit having an arterial blood circuit and a venous blood circuit;

a blood pump disposed in said arterial blood circuit;

a blood purifier connected between said arterial blood circuit and said venous blood circuit, and purifies the blood flowing in said blood circuit;

a first measuring means disposed in said arterial blood circuit for measuring the blood concentration of said arterial blood circuit;

to a second measuring means that is disposed in said venous blood circuit for measuring a blood concentration of said venous blood circuit;

a calculating means that calculates a ratio of said blood concentrations measured by said first measuring means and said second measuring means, and the blood concentration ratio as a theoretical value obtained by designated formula using a preset blood flow rate of a blood pump and said blood purifying rate of said blood purifier as parameters;

an evaluation means, for evaluating whether said blood concentration ratio obtained from said calculating means as a measurement value and said blood concentration ratio as a theoretical value are approximately equal.

2. The blood purifying means of claim 1 comprising;

a blood purifier connected between said arterial blood circuit and said venous blood circuit; and

a water removing means connected to said blood purifier for removing water from the blood flowing in said blood purifier; and said purifying rate which is the same

as said water removal rate of said water removing means.

3. The blood purification device of claim 2 comprising;

a substitution fluid supplying means disposed to supply substitution fluid into said blood circuit;

a calculating means for calculating said ratio of the blood concentrations calculated as a theoretical value by the designated formula using said substitution fluid supplying rate preset for said substitution fluid supplying means and a filtration rate for said blood purifier in addition to said preset blood flow rate and said preset water removal rate as parameters.

4. The blood purification device of the claim 1 comprising;

a reporting means for reporting said ratio difference between said blood concentration as a measurement value and said blood concentration as the theoretical value is bigger than the designated acceptable number by said evaluation means.

5. The blood purification device of the claim 2 comprising;

a reporting means for reporting said ratio difference between said blood concentration as a measurement value and said blood concentration as the theoretical value is bigger than the designated acceptable number by said evaluation means.

6. The blood purification device of the claim 3 comprising;

a reporting means for reporting said ratio difference between said blood concentration as a measurement value and said blood concentration as the theoretical

value is bigger than the designated acceptable number by said evaluation means.

7. A blood purification method utilizing a device having a structure of claim 1 comprising;

changing a blood flow rate, said purifying rate, said substitution fluid supplying rate and said filtration rate; and

identifying a malfunction if the ratio difference between said blood concentration as the measurement value and said blood concentration as said theoretical value is bigger than the designated acceptable number by said evaluation means.